

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

January 18, 2008

TO: Internal File

THRU: Wayne H. Western, Environmental Scientist III *WHW*

FROM: Priscilla Burton, CPSSc, Environmental Scientist III *PWB by an*

RE: PHC Update Pillar Splitting, Consol Energy Company, Emery Deep Mine, C/015/0015, Task ID #2885

SUMMARY:

Administrative approval dated April 11, 2007 was granted for full extraction of the **14th West** panel. The 30 day approval, allowed Consol time to prepare an amendment to the Mining and Reclamation Plan that addresses all the requirements of the coal rules for full extraction and planned subsidence of the **14th and 15th west panels and 8th North Main**. Previous information was reviewed as Tasks 2807 and 2794 and 2821. In addition to the revised PHC and Chapter VI (hydrology), this submittal, received December 6, 2007, describes full extraction beneath the **4th E Mains, and the 15th W, 6th W, and Zero North** panels. The information received updates surface ownership information and includes Zero North roof and floor analysis.

The Important Farmlands of Parts of Carbon, Emery, Grand, and Sevier Counties. 1981. Utah Ag Exp Sta Res Rpt No. 76 indicates that **the irrigated cropland above the 14th West, 1st North and the 6th West panels is prime farmland.**

The information provided is not recommended for approval, see deficiencies below.

TECHNICAL MEMO

TECHNICAL ANALYSIS:

GENERAL CONTENTS

IDENTIFICATION OF INTERESTS

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

Analysis:

The merger of IC Coal Inc. and Consolidation Coal Co. occurred on 8/30/2005. Appendix 1-1 of the MRP must to be updated to indicate that Consolidation Coal Co. is the owner of Island Creek Coal Co.

The list of Officers and Directors was revised with the 2006 Annual Report, Appendix 1-1 of the MRP must be updated accordingly.

Appendix 1-2 and the Surface ownership map were revised to reflect recent ownership transfers in R. 6 E. T. 22 S. Sections 19, 20, 21, 28, 29. However, in discussions with DOGM on June 13, 2007, the landowners in Sec 29 noted that the realignment of County Road 907 [EC 907] occurred in 2000 and that the EC 907 is used as the property boundary line between Carter and Robertson. The road realignment of 2000 must also be indicated on Plate I-1, and its effects on the property ownership in Section 29 should also be reflected.

Findings:

The approved Mining and Reclamation plan does not meet the requirements of the Regulations. Prior to approval, the Permittee must provide the following information in accordance with:

R645-301-121.100, The merger of IC Coal Inc. and Consolidation Coal Co. occurred on 8/30/2005, Appendix 1-1 of the MRP must to be updated accordingly. • The list of Officers and Directors was revised with the 2006 Annual Report, Appendix 1-1 of the MRP must be updated accordingly. • Verify the Emery County 907 road realignment in Section 29 on Plate I-1, and adjust property ownership lines accordingly on Plate I-1. • Appendix I-2 lists an incorrect address and telephone number for the BLM State Office

R645-301-121.200, County Road 906 should be labeled on Plate I-1. • Include all section lines on Plate I-1. • Dual boundary appears incorrect between Carter and Staley in Section 21. • Dual boundary appears incorrect between Young

Investment and Emery County in Section 30. •Dual boundary appears incorrect between Consol surface in Section 30.

OPERATION PLAN

SUBSIDENCE CONTROL PLAN

Regulatory Reference: 30 CFR 784.20, 817.121, 817.122; R645-301-521, -301-525, -301-731.

Analysis:

Subsidence Control Plan

Plate V-5 shows the mining panels. The Important Farmlands of Parts of Carbon, Emery, Grand, and Sevier Counties. 1981. Utah Ag Exp Sta Res Rpt No. 76 indicates that the irrigated cropland above the 14th West and the 6th West panels is prime farmland. Planned subsidence, as a result of full extraction is shown on Plate V-5 and includes a general lowering of the land by three feet. Since the panels lie diagonally the direction of the irrigation, there may be reduced flow to the southern 9 acre section of D.U. Company's irrigated land.

The federal coal in lease U5287 (issued 1971) encompasses approximately 450 – 500 acres as shown on Plate IV-2 UG Operations Plan and VI-6A Historic and Planned Mining Sequence. The 14th West panel runs beneath 68 acres of privately held surface in Sec. 29, T. 22 S., R. 6 E., belonging to Osbrun Bret Carter. The panel runs on a NW to SE diagonal beginning in the NE ¼ NW ¼ through the NW ¼ NE ¼ of Section 29.

The Permittee has also outlined the 15th West panels and the 8th North Main for full extraction, Plate VIII-1 Vegetation and Landuse Map. Landowners on the surface of the 15th west and 8th North Main include Russell H. Odle and Morgan Robertson. When the 15th West and 8th North Main are undermined, the surface features that may be affected by subsidence include the county road and a water supply line.

The First North area is also shown as Prime Farmland in Important Farmlands of Parts of Carbon, Emery, Grand, and Sevier Counties. 1981. Utah Ag Exp Sta Res Rpt No. 76. Figure XIII-1a shows that within the 160 acre 1st North federal lease, there are approximately 50 acres of prime farmland soils, that is one-third of the soil is prime farmland, if irrigated. Communication with the NRCS on December 12, 2006, confirms that there are approximately forty-eight irrigated acres within the First North federal lease at this time.

TECHNICAL MEMO

Zero North panel in federal lease U-50044 runs beneath Consol owned rangeland surface. The irrigation ditches that are currently in disrepair, as described in App. V-5, attest to the fact that this land was historically farmed and irrigated.

The 6th West panel in federal lease U-50044 runs beneath 9.1 acres of a larger 14.44 acre, irrigated D.U. Company field and County Road 915 as well as Consol owned rangeland surface, County Road 915, and a power line (App. V-5, Pre-Subsidence Survey and Plate I-1 and Plate VI-3).

The 4th East Mains parallels Christiansen Wash and is beneath Consol surface and County Road 907 and a power line.

The Permittee has notified the County and has obtained an agreement for subsidence mitigation with the County. The required pre-subsidence landowner notification letters to landowners and irrigation companies were not referenced and could not be found.

In accordance with R645-301-525.110, the Permittee has provided a map showing the location of renewable resource lands, and narrative describing the potential for material damage or diminished value of the renewable resource lands. **The term renewable resource lands is defined by R645-100, includes agricultural lands, croplands, and grazing lands.**

- Appendix V-4 states that there are 24 acres of irrigated cropland within the 132 acre area surveyed in April 2007. Figure V-4 Figure 1 provided with the April 2007 survey does not indicate the location of the 24 acres of cropland, however, Figure 1 and 2 included in Appendix VIII-3 indicate the location of cropland.
- Appendix V-5 Figure 1 provides a pre-subsidence survey for the 4 East Mains, 6th West and 0 North.
- Plate VI-3 shows the location of irrigated land.
- Previous communication with the NRCS confirms the designation of Penoyer soils as prime farmland in the fee portion of the 1st North IBC. (see App XII-1). Recent mapping by the NRCS has determined that the soils having potential for prime farmland within the IBC are Minchey loam, Penoyer loam, Ravola loam, and Tusher fine sandy loam, when irrigated.
- Subsidence movement between 3 and 10 ft is projected with the area shown on Plate V-5. Ground movement will be monitored (Sec V.B.1).

Findings:

The information provided in the proposed amendment is not considered adequate to meet the requirements of this section. Before approval, the Permittee must provide the following in accordance with:

R645-301-525.700, The required pre-subsidence landowner notification letters to landowners and irrigation companies were not referenced and could not be found.

R645-301-121.100, County Roads must be labeled on Figure 1, App. V-5 Pre-Subsidence survey.

GEOLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.22; R645-301-623, -301-724.

Analysis:

Chapter V.A. 4 of the MRP describes roof and floor analyses.

Chapter V.A. 4 contains the 2007 analysis of the 1st North roof and Zero North floor, representing federal lease U-50044. The samples were analyzed by Geochemical Testing, David Glessner, Laboratory Manager. The cover letter, accompanying the analyses, does not include a company letterhead, such that the contact information is not readily available for Geochemical Testing.

The 2007 1st north roof sample is potentially acid forming, due to concentrations of pyrite and virtually no neutralizing, carbonate content. The pH was 6.4. No analysis of SAR or EC was provided.

The Zero North floor sample did not have much more carbonate than the 1st north roof sample, but it had significantly less pyritic sulfur and is therefore less likely to produce acid. The pH of the floor was 6.9. No analysis of SAR or EC was provided.

Findings:

R645-301-624.300 and R645-301-132, Provide missing floor analysis for 1st North. • Provide missing roof analysis from 0 North. • Provide the analysis of Electrical Conductivity and Sodium Adsorption Ratio for roof and floor samples from 1st North and 0 North. • Request all subsequent letters from the laboratory be on company letterhead to document the qualifications of the laboratory, in accordance with R645-301-132.

TECHNICAL MEMO

CUMULATIVE HYDROLOGIC IMPACT ASSESSMENT (CHIA)

Regulatory Reference: 30 CFR Sec. 784.14; R645-301-730.

Analysis:

The 14th West, 6th West and 1st North areas are shown as Prime Farmland in Important Farmlands of Parts of Carbon, Emery, Grand, and Sevier Counties. 1981. Utah Ag Exp Sta Res Rpt No. 76. Consequently the PHC must consider the effect of undermining on irrigated renewable resource lands.

Findings:

A statement of renewable resource lands has been provided with the application. The Cumulative Hydrologic Impact of mining beneath agricultural lands will be assessed by the Division.

RECOMMENDATIONS:

The application is not recommended for approval .